

WHAT IS CLAIMED IS:

1. A hologram recording apparatus comprising:
  - a laser source emitting laser beams;
  - a diffraction control element for receiving a laser beam emitted from the laser source and controlling the diffraction of the received laser beam before letting it exit;
  - a diffracted light component blocking element for blocking a predetermined diffracted light component in the diffracted light emitted from the diffraction control element; and
  - a condensing element for condensing a diffracted light component that has not been blocked by the diffracted light component blocking element onto a hologram recording medium.
2. The hologram recording apparatus according to Claim 1, wherein the diffraction control element has a plurality of individual diffraction control elements that control the diffraction of the received laser beam independently from each other.
3. The hologram recording apparatus according to Claim 2, wherein the diffracted light component blocking element blocks tertiary diffracted light or more in terms of an

absolute value by the individual diffraction control elements.

4. The hologram recording apparatus according to Claim 2, wherein the individual diffraction control elements have first and second phase control elements for controlling phase differences among outgoing light from each element.

5. The hologram recording apparatus according to Claim 4, wherein the outgoing light beams from the first and second phase control elements, respectively, are the diffracted light beams that have been diffracted by the first and second phase control elements.

6. The hologram recording apparatus according to Claim 5, wherein the diffracted light component blocking element blocks primary diffracted light or more in terms of absolute value by the first and second phase control elements.

7. The hologram recording apparatus according to Claim 5, wherein the respective first and second phase control elements are substantially ribbon-shaped.

8. The hologram recording apparatus according to Claim 7, wherein at least either the first or the second phase

control element is displaced by an electrostatic force.

9. The hologram recording apparatus according to Claim 1, wherein the condensing element comprises a plurality of lenses.

10. The hologram recording apparatus according to Claim 1, further comprising:

a light dividing element for dividing a laser beam emitted from the laser source into first and second light beams and causing the first light beam to enter the diffraction control element; and

a second condensing element for condensing the second light beam emitted from the light dividing element onto a spot on the hologram recording medium where a laser beam emitted from the condensing element has been condensed.

11. The hologram recording apparatus according to Claim 10, further comprising:

a light blocking element for blocking the first light beam emitted from the light dividing element; and

a light receiving element for receiving light emitted from the hologram recording medium on the basis of the laser beam converged onto the hologram recording medium by the second condensing element.

12. A hologram recording method comprising:  
a diffraction control step for controlling the diffraction of a laser beam by a diffraction control element before letting laser beam exit;  
a diffracted light component blocking step for blocking a predetermined diffracted light component in the diffracted light emitted in the diffraction control step; and  
a condensing step for condensing a diffracted light component that has not been blocked in the diffracted light component blocking step onto a hologram recording medium.

13. The hologram recording method according to Claim 12, wherein the diffraction control element has a plurality of individual diffraction control elements that control the diffraction of the received laser beam independently from each other.

14. The hologram recording method according to Claim 13, wherein the diffracted light component blocking element blocks tertiary diffracted light or more in terms of an absolute value by the individual diffraction control elements.

15. The hologram recording method according to Claim

13, wherein the individual diffraction control elements have first and second phase control elements for controlling phase differences among outgoing light beams from the individual elements.

16. The hologram recording method according to Claim 15, wherein the outgoing light beams from the first and second phase control elements, respectively, are the diffracted light beams that have been diffracted by the first and second phase control elements.

17. The hologram recording method according to Claim 16, wherein the diffracted light component blocking element blocks primary diffracted light or more in terms of absolute value by the first and second phase control elements.

18. A hologram recording medium for recording data by using diffracted light obtained by blocking a predetermined diffracted light component in diffracted light emitted from a diffraction control element that controls the diffraction of a laser beam before letting the laser beam exit.